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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IN RE CYGNUS TELECOMMUNICATIONS
TECHNOLOGY, LLC, PATENT
LITIGATION

No. MDL-1423
This Order Applies to All Actions

**THIS ORDER RELATES TO:
All Actions**

C-02-00142 RMW
C-02-00145 RMW
C-02-05437 RMW
C-03-03378 RMW
C-03-03594 RMW
C-03-03596 RMW
C-03-04003 RMW
C-04-03001 RMW
C-04-03365 RMW
C-04-04247 RMW
C-04-04359 RMW
C-06-03843 RMW
C-06-04295 RMW
C-06-06479 RMW

CLAIM CONSTRUCTION ORDER AND ORDERS ON VARIOUS SUMMARY JUDGMENT MOTIONS

[MDL-1423 Docket #'s 634, 674, 675, 679, 686, 688, 690, 706, 746, 751, and 755 and C-03-04003 Docket # 102]

26 Cygnus has sued numerous defendants for infringement of U.S. Patent Nos. 5,883,964 ("'964
27 patent") and 6,035,027 ("'027 patent"). Proceedings from various districts across the country have
28 been consolidated before this court. Cygnus asserts claims 1 and 6 of the '964 patent and claims 1,

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1 6, and 11 of the '027 patent. Since Cygnus sought to amend claims 6 and 11 of the '027 patent in
 2 reexamination proceedings and the Patent and Trademark Office ("PTO") issued a final rejection on
 3 those claims, the claims remaining at issue here are claims 1 and 6 of the '964 patent and claim 1 of
 4 the '027 patent.¹ The parties seek construction of a number of claim terms, which are construed
 5 below. The defendants move for summary judgment that the patents-in-suit are invalid under 35
 6 U.S.C. §§ 102(b), 103(a), and 112. The parties cross-move for summary judgment on infringement.

7 **I. CLAIM CONSTRUCTION, INDEFINITENESS,
 WRITTEN DESCRIPTION & ENABLEMENT**

8 **A. Introduction**

9 In an order filed on July 29, 2004, the court ruled on motions for summary judgment brought
 10 by certain defendants. The original prosecution history of the patents-in-suit was set forth in detail
 11 in that order and will not be repeated here. Necessary to that ruling was the construction of certain
 12 claim terms, including "direct inward dial number." The participating parties in these consolidated
 13 actions have now briefed and argued construction of the claims of the patents-in-suit. The court
 14 allowed Cygnus to reargue the construction of "direct inward dial number." The other terms at issue
 15 have not been considered previously.

16 Defendants take the position that certain claim terms cannot be construed because they are
 17 indefinite. Defendants' motion for summary judgment that the patents-in-suit are invalid under §
 18 112 is directed primarily to the alleged indefiniteness of certain phrases of the patents-in-suit.
 19 Because of the substantial overlap between defendants' claim construction positions and their motion
 20 for summary judgment under § 112, the court will address both together.

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24 ¹ Both patents-in-suit have been subsequently subjected to reexamination proceedings, Nos.
 25 90/007,308 and 90/007,309. All claims of the '964 patent were confirmed, as well as claim 1 of the
 26 '027 patent. Cygnus has attempted to modify claims 6 and 11 of the '027 patent, and on December
 19, 2006, the PTO issued a final rejection of those claims. All of the terms to be construed appear in
 27 at least one of the confirmed asserted claims, and the court will not consider Cygnus's proposed
 28 amendments to claims 6 and 11 of the '027 patent since those amendments have not yet been
 accepted by the examiner during the reexamination. Cygnus's deadline for responding to the
 examiner's rejection of claims 6 and 11 was February 19, 2007. See Office Action, App. 90/007,309
 (Dec. 19, 2006) at 37.

1 **B. Construction of Disputed Terms**2 **1. "After the subscriber terminates the incoming call attempt"**

3 It is not clear why the parties do not agree on what "after" means. The "control means" of
 4 claim 1 of the '964 patent must have the ability of "calling the subscriber remote telephone number
 5 through the first telephone connection means after the subscriber terminates the incoming call
 6 attempt and connecting to the subscriber telephone station." Defendants argue that "after the
 7 subscriber terminates the incoming call attempt" means that the subscriber is not called back "until a
 8 detection of the subscriber telephone handset going 'on-hook' to hang-up." Cygnus states that the
 9 phrase does not need construction, but also says that the phrase should be read to mean that the
 10 subscriber terminates the call before he is charged for it. Cygnus's support for this latter argument is
 11 that claim 11 of the '027 patent is a Jepson-style claim directed to "the improvement comprising
 12 using direct inward dialing for the initial call from the subscriber to the service, and the subscriber
 13 hangs up before there is a charge for the call from the subscriber to the service." Cygnus asserts that
 14 this claim "makes explicit what was implicit in the earlier patent."

15 The term "after" is not a technical telecommunications term but rather an ordinary English
 16 word. The limitations each side wish read into "after the subscriber terminates the incoming call
 17 attempt" are not supported by the clear language of the claim. "After the subscriber terminates the
 18 incoming call attempt" has a plain meaning and needs no interpretation.

19 **2. Whether method steps must be performed in order listed**

20 The Federal Circuit has developed a two-part test for determining whether a series of steps in
 21 a method claim which does not recite that the steps must be performed in the order written must
 22 nevertheless be performed in that order. *See Interactive Gift Express, Inc. v. Compuserve Inc.*, 256
 23 F.3d 1323, 1342-43 (Fed. Cir. 2001). First, the court must consider whether the claim language as a
 24 matter of logic or grammar requires any particular order. *Id.* Second, the specification must be
 25 considered to determine if it reveals that a certain order of steps is required. *Id.*

26 It is not clear which claims defendants argue must be performed in the order written. The
 27 parties' joint claim construction statement refers to claim 6 of the '964 patent and claim 6 of the '027

1 patent, while defendants' claim construction brief refers to claims 1 and 6 of the '964 patent. Cygnus
 2 argues that no claim requires a specific sequence of steps.

3 Claim 1 of the '964 patent is an apparatus claim and as such, it is not performed, much less
 4 performed in a specific order. Claim 6 of the '027 patent currently stands rejected by the PTO after
 5 amendment. The court will therefore consider only the order of steps for claim 6 of the '964 patent.

6 Claim 6 of the '964 patent is

7 A method establishing a telephone communication link between a subscriber
 8 telephone station and a destination telephone station, both being connected through a
 telephone exchange, comprising the steps of:

9 [1] storing a preassigned direct inward dial telephone number associated with a
 10 subscriber;

11 [2] storing a subscriber remote telephone number associated with the subscriber
 telephone station;

12 [3] receiving an incoming direct inward dial telephone number from a first
 13 telephone exchange connection as part of an incoming call attempt from the
 subscriber telephone station;

14 [4] comparing the incoming direct inward dial telephone number to the
 15 preassigned direct inward dial telephone number and if the incoming direct
 inward dial telephone number matches the preassigned direct inward dial
 telephone number associated with the subscriber, performing the following steps:

16 [a] [i] calling the subscriber remote telephone number after [ii] the
 17 subscriber terminates the call attempt and [iii] connecting to the subscriber
 telephone station;

18 [b] receiving from the subscriber a calling telephone number for the
 destination station;

19 [c] calling the calling telephone number through a second telephone
 exchange connection; and

20 [d] bridging the first telephone exchange connection to the second
 21 telephone exchange connection so that the subscriber is connected to the
 destination.

22 (bracketed numerals and letters added). There is no reason step [1] must be performed before step
 23 [2]. Although it might be difficult to receive a call and then store information necessary to initiate
 24 callback, steps [1], [2], and [3] are not required as a matter of logic or grammar to occur in any
 25 particular order. The comparing of step [4], however, cannot occur until the information from steps
 26

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1 [1] and [2] has been received and the call of step [3] has been received. Step [4] is grammatically
 2 and necessarily a condition precedent to the performance of steps [a] through [d].

3 The "calling" of step [a][i] is recited to occur "after" the "call attempt" termination of
 4 step [a][ii]. Logically, the connection "to the subscriber telephone station" in step [a][iii] cannot be
 5 made until the subscriber is called in step [a][i]. Because step [b] must occur after step [4], the
 6 "connect to the subscriber telephone station" in step [a][iii] must occur before information can be
 7 received from the subscriber in step [b]. The "calling telephone number" logically must be received
 8 in step [b] before that number can be called in step [c]. The "bridging" of step [d] logically must
 9 follow step [c]. This sequence is consistent with the flow charts in the '964 patent, figs. 2-5.

10 In summary, steps [1], [2], and [3] may occur in any order relative to each other, but all must
 11 occur before step [4]. After step [4], steps [a][ii], [a][i], [a][iii], [b], [c] and [d] must occur in that
 12 sequence.

13 **3. "Direct inward dial telephone number"**

14 The court previously determined that, in the contexts of the patents-in-suit, "direct inward
 15 dial number" means "the last four or five numbers dialed by a subscriber which are passed to the
 16 system over a trunk line capable of carrying a direct inward dial number." Order (dkt. # 263²) at 21.
 17 Although Cygnus has repeatedly objected to the court's construction of "direct inward dial number,"
 18 Cygnus's contentions in support of revising that construction are unpersuasive. In summary, the
 19 court's previous construction was based on several factors. First, the specification of each patent
 20 contains an identical definition of "direct inward dial number":

21 Accordingly, the present invention advantageously utilizes the Direct Inward Dial
 22 (DID) numbers. Under LEC [local exchange company] tariffs it is possible to lease a
 23 block, or group, of telephone numbers. The size of the groups may vary between
 24 LECs, but a group of one hundred numbers is often a typical group. When these
 25 numbers are sequential, they are commonly referred to as blocks, but groups of
 26 random numbers are also used.

27 For purposes of this invention, sequential numbering is not required. The customer
 28 leasing the numbers from an exchange does not have to lease a corresponding
 terminating circuit for each number in the group in order to place a call to each
 number. Instead, the customer leases local facilities in quantities the customer feels

² Except where otherwise noted, all docket numbers in this order are those of the master docket for MDL 1423.

1 are adequate to handle traffic from the leased numbers. *When a caller dials one of*
 2 *the numbers in the group, the central office of the terminating LEC (the LEC that*
 3 *assigned the numbers) will complete the call over any of the leased local facilities*
 4 *that are available and also pass the last four, sometimes five, numbers that the called*
 5 *party dialed. The numbers that are passed are called the Direct Inward Dial, or*
 6 *DID, numbers.*

7 '964 patent at 5:63-6:16; '027 patent at 5:66-6:18 (emphasis added). Second, telecom dictionaries
 8 dating from 1990 to 2000 describe "direct inward dialing" as a feature of certain phone systems that
 9 allowed the phones of a company to be connected so that they could call each other by dialing
 10 sequences of fewer than seven digits. Dkt. # 263 at 20. These definitions are consistent with the
 11 quoted language of the patent specifications and the inventor apparently contemplated leasing blocks
 12 of numbers analogous to a block of numbers used by a large office. Third, during prosecution of
 13 both applications, the examiner rejected the claiming of identifying a subscriber via giving him an
 14 "assigned number" for calling the service. *Id.* at 25. In response, the patentee limited the claims to
 15 identification using DID numbers, which the PTO allowed, so the plaintiff is now estopped from
 16 attempting to expand the claims of the patents to identifying a subscriber via assigned numbers other
 17 than DID numbers. *Id.*

18 Cygnus now contends that a DID number cannot be four or five digits because one cannot
 19 complete a phone call by dialing less than seven digits. However, Cygnus overlooks the
 20 specification of the patents-in-suit, which explain that while a subscriber dials a seven or ten digit
 21 phone number sufficient to complete a call, the local exchange carrier passes along only "the last
 22 four, sometimes five, numbers that the called party dialed," which is enough to determine which
 23 number in the rented block of numbers a subscriber called. Cygnus also argues that if a provider
 24 rents telephone numbers in different area codes, blocks of non-sequential telephone numbers, or
 25 block of more than telephone 100,000 numbers, four or five digits may not provide enough
 26 information to reliably distinguish all the rented numbers. Although Cygnus has pointed out
 27 potential problems with practicing the invention on a large scale, this does not overcome the
 28 definition of "direct inward dial number" provided by the inventor. Although Cygnus identifies Call
 Interactive (a company with which Cygnus contracted) planned to have more than 10,000
 subscribers, which would have required consideration of at least five digits to distinguish

1 subscribers. Call Interactive's method of operation is not disclosed in the specifications of the
 2 patents-in-suit and is not relevant to the construction of the claims.

3 In its previous order, the court ruled that claims covering all methods of identifying a
 4 subscriber based just on the number he dialed had been surrendered during prosecution, and that
 5 Cygnus was estopped from expanding the claims beyond using any method other than a direct
 6 inward dial number to identify a subscriber. Cygnus has not explained why the court's ruling that it
 7 is limited by its narrowing argument made during prosecution is incorrect.

8 The court reaffirms its prior order; "direct inward dial telephone number" means "the last
 9 four or five numbers dialed by a subscriber which are passed to the system over a trunk line capable
 10 of carrying a direct inward dial number."

11 **4. "Telephone communication link"**

12 This term does not need construction.

13 **5. "Telephone exchange"**

14 The term "telephone exchange" is not defined in the specification of the '964 patent.
 15 NEWTON'S TELECOM DICTIONARY 846 (16th edition) defines "telephone exchange" as "[a] switching
 16 center for connecting and switching phone lines. "Wikipedia³ defines "telephone exchange" as "a
 17 system of electronic components that connects telephone calls." Defendants argue that the patent's
 18 use of the term is ambiguous because one cannot tell whether "telephone exchange" refers to "the
 19 domestic and/or international public telephone network (IXC)" or the "local exchange company
 20 (LEC)." See '964 patent, col. 6, ll. 42-43, 45.

21 "Telephone exchange" is mentioned in claim 1 of the '964 patent:

22 first telephone connection means connected to the control means and operable for
 23 connecting through a trunk line to the telephone exchange and for receiving an
 24 incoming direct inward dial telephone number on the trunk line from the telephone
 25 exchange as part of an incoming call attempt from the subscriber telephone station,
 26 the incoming direct inward dial telephone number indicating the number called by the
 27 subscriber;

28 second telephone connection means connected to the control means and operable for
 29 dialing out through the telephone exchange;

3 http://en.wikipedia.org/wiki/Telephone_exchange

1 *id.*, col. 10, ll. 14-24, as well as in claim 6 of the '964 patent:

2 A method establishing a telephone communication link between a subscriber
 3 telephone station and a destination telephone station, both being connected through a
 3 telephone exchange,

4 *id.*, col. 10, ll. 62-65.

5 The use of the term "telephone exchange" in the patents fits with the dictionary definitions
 6 and nothing suggests that one skilled in the art reading the '964 patent would interpret the term
 7 otherwise.

8 Defendants' indefiniteness contention is without merit. "Whether a claim is invalid under 35
 9 U.S.C. § 112, ¶ 2, for indefiniteness is a question of law The definiteness inquiry focuses on
 10 whether those skilled in the art would understand the scope of the claim when the claim is read in
 11 light of the rest of the specification." *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d
 12 684, 692 (Fed. Cir. 2001). The court rejects defendants' contention that the multiple mentions of
 13 "telephone exchange" in the '964 patent renders it indefinite. Construing "telephone exchange"
 14 (which is not defined in the patent) as "a system of electronic components that connects telephone
 15 calls" would allow a single meaning of "telephone exchange" to encompass both the IXC and the
 16 LEC. Because 35 U.S.C. § 282 gives a patent "a statutory presumption of validity," a challenger
 17 bears the burden of proving "by clear and convincing evidence" that a patent is invalid. *Monsanto*
 18 *Co. v. Scruggs*, 459 F.3d 1328, 1336-37 (Fed. Cir. 2006). Defendants have not met this burden.
 19 "Telephone exchange" means "a system of electronic components that connects telephone calls."

20 **6. "First telephone connection means"
 21 "Second telephone connection means"**

22 The parties agree that "first telephone connection means" and "second telephone connection
 23 means" are means-plus-function terms under paragraph six of 35 U.S.C. § 112. As the Federal
 24 Circuit has explained: "Claim construction of a means-plus-function limitation includes two steps.
 25 First, the court must determine the claimed function. Second, the court must identify the
 26 corresponding structure in the written description of the patent that performs that function." *Applied*
 27 *Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006) (citations omitted).

1 "Telephone connection means" appears only in claim 1 of the '964 patent. The "telephone
2 connection means" clause reads:

3 first telephone connection means connected to the control means and operable for
4 connecting through a trunk line to the telephone exchange and for receiving an
5 incoming direct inward dial telephone number on the trunk line from the telephone
6 exchange as part of an incoming call attempt from the subscriber telephone station,
7 the incoming direct inward dial telephone number indicating the number called by the
8 subscriber.

9 '964 patent, col. 10, ll. 14-21. The "telephone connection means" thus appears to have two
10 functions, being "operable for connecting" and "receiving."

11 Defendants argue that no structure in the specification corresponds to the "first telephone
12 connection means." 112 Mot. (dkt. # 675) at 10-11. Defendants identify some candidates but
13 discount each in turn:

14 . . . the system obtains the direct inward dial number from storage for placing that
15 number on an output connection to the exchange.

16 . . .

17 CRU 20 includes a computer, controller, or other suitable data processing unit along
18 with appropriate sensing circuit connections as is conventional for data acquisition
19 and control technology.

20 . . .

21 This includes switching functions to handle line (circuit) connections; interactive
22 voice response operations; database controller for subscriber identification; and a
23 system message detail recording (SMDR) unit 24 to provide information necessary to
24 create call records.

25 '964 patent, col. 4, ll. 45-47, col. 6, ll. 48-51, 60-65.

26 Cygnus points to column 5, lines 10 through 24 of the '964 patent as the corresponding
27 structure for "first telephone connection means." This portion of the specification recites that

28 [a] signal is sent from the service center to the originator, thus indicating that the
29 originator is identified whereupon the originator is instructed or prompted to
30 terminate the call. Termination by the calling party is sensed at the service center
31 followed by seizing of a first outbound circuit over which the service center outputs
32 the call-back number for the identified originator. This operation reconnects the
33 service center via a voice connection to the originator.

34 The specification also discusses that the invention relates to a "public telephone network." '964
35 patent col. 2, ll. 49-50, 59-60. The recitation in the specification of "output connection to the
36 exchange" is sufficient structure to satisfy the requirements of means-plus-function claiming.

1 Although the drafter could have just called the "telephone connection means" what it appears to be,
 2 namely a phone line, one skilled in the art would recognize a telephone line as the structure
 3 performing the connecting and receiving functions.⁴

4 **7. "First telephone exchange connection"
 "Second telephone exchange connection"**

5 "Telephone exchange connection" appears only in claim 6 of the '964 patent. The parties
 6 generally agree that "telephone exchange connection" should be construed in the same manner as
 7 "telephone connection means." "Telephone exchange connection" means "telephone line."

8 Defendants argue that the way "first telephone exchange connection" is used in claim 6
 9 renders the claim fatally indefinite and not enabled.⁵ Claim 6 of the '964 patent is

10 A method establishing a telephone communication link between a subscriber
 11 telephone station and a destination telephone station, both being connected through a
 12 telephone exchange, comprising the steps of:

13 [1] storing a preassigned direct inward dial telephone number associated with a
 14 subscriber;

15 [2] storing a subscriber remote telephone number associated with the subscriber
 16 telephone station;

17 [3] receiving an incoming direct inward dial telephone number from a *first*
 18 *telephone exchange connection* as part of an incoming call attempt from the
 19 subscriber telephone station;

20 [4] comparing the incoming direct inward dial telephone number to the
 21 preassigned direct inward dial telephone number and if the incoming direct
 22 inward dial telephone number matches the preassigned direct inward dial
 23 telephone number associated with the subscriber, performing the following steps:

24 [a] [i] calling the subscriber remote telephone number after [ii] the
 25 subscriber terminates the call attempt and [iii] connecting to the subscriber
 26 telephone station;

27 [b] receiving from the subscriber a calling telephone number for the
 28 destination station;

25 ⁴ Defendants also argue that disclosure of the details of James Alleman's "386 System" in the
 26 specification would have been necessary to satisfy the written description requirement as to "second
 27 telephone connection means." Disputed issues of material fact prevent resolution of this issue.

28 ⁵ Defendants also argue that claim 6 of the '964 patent is invalid for failing to satisfy the written
 29 description requirement. This argument is duplicative of their arguments that claim 6 is indefinite
 30 and not enabled. *See* 112 Mot. (dkt. # 675) at 13-14.

1 [c] calling the calling telephone number through a *second telephone exchange connection*; and

2 [d] bridging the *first telephone exchange connection* to the *second telephone exchange connection* so that the subscriber is connected to the destination.

3 (emphasis and bracketed numerals and letters added). As defendants read claim 6, the subscriber
 4 makes calls in via the "first telephone exchange connection" in step [3], the connection via the "first
 5 telephone exchange connection" is terminated in step [4][a][ii] and no subsequent connection via the
 6 "first telephone exchange connection" is explicitly made and yet in step [4][d], the "first telephone
 7 exchange connection" and "second telephone exchange connection" are bridged. The absence of a
 8 step connecting to the "first telephone exchange connection" after the termination in step [4][a][ii]
 9 makes performance of step [4][d] impossible and, therefore, in defendants' view, the claim is
 10 inoperable since the connection made in step [3] was terminated in step [4][a][ii].

11 Although the claim does not specifically refer in steps [4][a][i], [a][iii] and [b] to
 12 reconnecting or remaking a "first telephone exchange connection," those steps combined with step
 13 [4][d] necessarily would tell someone skilled in the art that what is referred to in step [4][d] as the
 14 "first telephone exchange connection" is the connection referred to in steps [4] [a][i] and [ii].
 15 Therefore, claim 6 is not indefinite and is enabled.

16 **8. "Subscriber telephone station"**

17 Cygnus wishes a broad construction of "subscriber telephone station" that would cover any
 18 method of making phone calls, including personal computers. The defendants advocate a very
 19 narrow construction that would limit the phrase to the telephone handset associated with the
 20 telephone number associated with the subscriber. Although in the preferred embodiment, the
 21 subscriber is "connected to the system via a telephone handset," '964 patent, col. 6, ll. 40-41, there is
 22 nothing else in the patent that suggests "subscriber telephone station" should only be a telephone
 23 handset. The court therefore construes "subscriber telephone station" as "a device that allows audio
 24 communication over a telephone network."

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1 **9. "Dialing"
"Calling"**

2 Cygnus advocates a broad construction of "dialing" and "calling," while defendants seek a
3 narrow interpretation. Specifically, defendants wish to limit dialing or calling to the use of DTMF
4 tones (which the defendants describe as "touch tones") and exclude alternative technologies. Again,
5 the description of the preferred embodiment is the only source of language that supports defendants'
6 position: "The call-back number is then outpulsed by the DTMF recognition and dialing unit . . ." '964
7 patent, col. 7, ll. 40-42. Defendants' proposed limitation based on the preferred embodiment is
8 not warranted, and no further construction of "dialing" or "calling" is therefore necessary.

9 **10. "Trunk line"**

10 Cygnus argues that "trunk line" needs no construction because the term is not "an element of
11 the patented combination." The term, however, appears twice in claim 1 of the '964 patent in
12 connection with the description of the "first telephone connection means":

13 first telephone connection means connected to the control means and operable for
14 connecting through a trunk line to the telephone exchange and for receiving an
15 incoming direct inward dial telephone number on the trunk line from the telephone
16 exchange as part of an incoming call attempt from the subscriber telephone station,
the incoming direct inward dial telephone number indicating the number called by the
subscriber;

17 '964 patent, col. 10, ll. 14-19. In light of the court's construction of DID number, defendants
18 correctly contend that "trunk line" is limited to a phone line specially configured to pass a DID
19 number along with a call. The first telephone connection means must be able to "receiv[e] an
20 incoming direct inward dial telephone number."

21 **11. "Service center"**

22 "Service center" appears several times in claim 1 of the '027 patent, which covers
23 a *service center* having a direct inward dial number assigned to each subscriber and
24 an assigned call-back number recorded for each subscriber, a sensor for receiving the
25 direct inward dial signal sent by the subscriber to the *service center*, a first outbound
26 circuit from the *service center* over which the center dials the callback number of the
27 subscriber when the direct inward dial number is triggered and on which the
subscriber enters the number of the called party, a second outbound circuit from the
service center over which the center dials the number entered by the subscriber on the
first circuit to reach the called party, and an automatic bridging device for bridging
the subscriber on the first circuit to the called party on the second circuit, whereby the

1 subscriber is telephonically linked to the called party without human intervention at
 2 the *service center*.

3 '027 patent, col. 10, ll. 7-22 (emphasis added).

4 The '027 specification contains the following description⁶ of the service center:

5 A *central location service center* is established at which a call-back telephone
 6 number is provided for each subscribing call originator. A number is assigned for use
 for all calls that are placed by that originator. This assigned number is used to call
 the *service center* whereupon the originator is identified by the *service center*.

7 A signal is sent from the *service center* to the originator, thus indicating that the
 8 originator is identified whereupon the originator is instructed or prompted to
 9 terminate the call. Termination by the calling party is sensed at the *service center*
 followed by seizing of a first outbound circuit over which the *service center* outputs
 the call-back number for the identified originator. This operation reconnects the
 10 *service center* via a voice connection to the originator.

11 The originator is prompted to input the telephone number of the called party the
 12 originator intends to call. A second outbound circuit is seized at the *service center*
 whereupon the called party number is outputted to this second outbound circuit.
 Finally, the originator is bridged to the second outbound circuit thus connecting the
 13 originator with the called party.

14 *The process, or system apparatus, in accordance with this invention, is preferably*
 15 *contained at a central location or service center. Since it is essentially self-contained*
 16 *for its purpose and requires a minimal number of lines connecting it to an exchange,*
the present invention is adaptable for relatively easy relocation to interface with the
most economic tariff rate location wherever that might physically present itself
throughout the world.

17 '027 patent, col. 3, ll. 33-62 (emphasis added). The paragraphs that follow describe the function of
 18 the "central location":

19 The process and apparatus of this invention interactively establishes
 20 communication links between a calling party and one or more parties called by that
 21 calling party. It employs input and output connections to a telephone exchange that
 22 provides interface switching of the calling party with the *central location*. A signal is
 generated containing data uniquely identifying the originating station of the calling
 party which signal is placed on the input connection to the *central location* whenever
 the calling party places a call to that input connection from their station.

23 The *central location* stores the unique identifying data of one or more
 24 authorized calling party subscribers. A signal on the *central station* input connection
 25 attempting to establish communications between the exchange and the central
 location causes the system to compare the data of the identifying signal associated
 with the connection attempt with the contents in the data storage.

26
 27
 28 ⁶ The '964 specification contains the same description, but the phrase "service center" does not appear in the claims of the '964 patent.

1 In response to a favorable comparison, a call^[7] is originated from this *central*
 2 *location* to the calling party station. Signals are then received from the calling party
 3 station for identifying a called party station with which the calling party desires to
 4 establish a communication connection. That is, these calling party originated signals
 5 identify a third party station. The *central location* finally bridges a communication
 6 connection between the calling party station and the third party station.
 7

8 Preferably, the present invention responds to a favorable identification
 9 comparison as mentioned above by returning an audible signal to the calling party.
 10 This indicates the favorable comparison result so that the calling party will know to
 11 terminate the call attempt so as to allow the *central location* to originate a call to the
 12 call originating station. Failure of the calling party to terminate the call attempt a
 13 predetermined period of time after the recognition signal is given or from the time of
 14 commencement of an attempt to establish a connection from the calling party station
 15 terminates further processing of the connection attempt at the *central location*.
 16

17 Connection attempt termination, because of the time-out function or a failure
 18 to produce a favorable comparison, can trigger a process which results in temporarily
 19 establishing a communication connection with the calling party station for presenting
 20 an audio message thereto. The *central location* typically will disconnect from the
 21 calling station after completion of an audio message.
 22

23 The present invention is particularly well suited for advantageously utilizing
 24 the calling party identifying data in the form of the contemporary direct inward dial
 25 number produced by the exchange. Thus, the *central location* stores in a memory the
 26 direct inward dial number for each calling party authorized to utilize the system.
 27 Following a favorable comparison of the calling party number with a stored number,
 28 the system obtains the direct inward dial number from storage for placing that
 29 number on an output connection to the exchange.
 30

31 A failure of the called party to answer the call attempt from the *central*
 32 *location* can result in provision of an indication to the calling party that they can
 33 select between terminating connection attempts or attempting to establish a
 34 connection with another third party. The invention can accommodate establishment
 35 of a multiple party conference call in response to calling parties instructions to the
 36 *central location*.
 37

38 The system is likewise well suited for receiving and collecting management
 39 and billing information on calls established by the system. This enables a
 40 determination of the extent of use of the system by authorized and/or unauthorized
 41 calling parties. After establishing a communication connection with the calling party
 42 station, the *central location* can respond to a special signal originated from the calling
 43 party station so as to terminate further communication and communication attempts
 44
 45

27 ⁷ Presumably, this is a typographical error and should instead be "call," as it is in the '964 patent.
 28 *See* '964 patent, col. 4, 1. 10.

1 with the calling party station. This invention can utilize a dual tone multi-frequency
 2 signal as the above mentioned special signal from said calling party station.

3 '027 patent, col. 3, l. 63-col. 5, l. 4. The inventor then switched back to describing the "service
 4 center":

5 The method and apparatus of this invention provides an economical telephone
 6 service by employing the most advantageous tariff between all originator and one or
 7 more called parties. A *service center* is established at which a call-back telephone
 8 number is provided for each originator, and at which a number is assigned for use for
 9 all calls that are placed by that originator. The assigned number is used to call the
 10 *service center* whereupon the originator is identified by the *service center*.

11 A signal is sent from the *service center* to the originator thus indicating that the
 12 originator is identified whereupon the originator is instructed to terminate the call.
 13 Sensing originator call attempt termination, the *service center* responds by seizing a
 14 first outbound circuit over which the *service center* outputs the call-back number for
 15 the identified originator thereby reconnecting the *service center* to the originator.

16 The originator is prompted to input the telephone number of the called party the
 17 originator intends to call. A second outbound circuit is seized at the *service center*
 18 whereupon the called party number is outputted to the second outbound circuit.
 19 Bridging the originator to the second outbound circuit thus connects the originator
 20 with the called party.

21 '027 patent, col. 5, ll. 4-27.

22 From this, it appears the inventor used "service center" and "central location"
 23 interchangeably. Defendants argue that "service center" means "a single location housing the
 24 service center master system which has: (a) a computer or switch including integrated components
 25 for performing switching functions to handle circuit connections, including a circuit connection to
 26 receive DID service from the LEC central office, (b) the database controller, (c) the DTMF
 27 generator, (d) the bridging function, and (e) the subscriber table server (the database)." Cygnus
 28 argues that "service center" "certainly does not mean 'a single location housing' particular
 equipment" because "it is commonplace for international call-back providers to have equipment and
 personnel at more than one location." Regardless of what the standard industry practice may now
 be, the patent itself shows that the inventor clearly preferred that the process or system apparatus of
 the invention be located at a "central location" ("service center") and adaptable for easy relocation to
 interface with the most economic tariff rate location wherever that was physically located.
 Therefore, although the inventor may have contemplated the possibility of having the system

1 equipment located at more than one place despite his preference for a central location, by use of the
 2 term "service center" in claim 1 of the '027 patent the inventor is referring to a "central location"
 3 rather than a series of separate locations. "Service center" means the central location at which the
 4 system apparatus carries out the process of the invention.

5 **12. "Enters"**

6 Defendants argue that "enters" means "inputting the DTMF digits of the called party number
 7 by the subscriber using the keypad of the telephone handset," while Cygnus argues that "enters"
 8 means "dials" or "calls." "Enters" appears in claims 1, 6, and 11 of the '027 patent as part of the
 9 phrase "the subscriber enters the [telephone] number of the called party." "Enters" appears in the
 10 specification once, in the description of the preferred embodiment: "When the subscriber enters a
 11 called party number, CRU 20 seizes a second outbound circuit 25. DTMF Generator 26 recognizes
 12 the called party number DTMF digits entered by the subscriber and outpulses those digits over the
 13 second seized circuit." '027 patent, col. 7, ll. 50-54. While in the preferred embodiment, the "called
 14 party number" is clearly sent by the subscriber as "DTMF digits," the claim is not so restricted.
 15 "Enters" means "dials."

16 **13. "Triggered"**

17 Cygnus asserts that in the '964 patent, "triggered" is used in the ordinary English sense of
 18 initiated or precipitated. Defendants admit that "[t]he term 'triggered' is not defined in the
 19 specification" but argue that "triggered" should be limited to "(a) a matching of the incoming direct
 20 inward dial number (DID) with the assigned/stored DID number and (b) the subscriber hanging up."
 21 Defendants overlook that the specification uses "trigger" in another context in a manner consistent
 22 with Cygnus's interpretation and inconsistent with their own:

23 Connection attempt termination, because of the time-out function or a failure to
 24 produce a favorable comparison, can trigger a process which results in temporarily
 25 establishing a communication connection with the calling party station for presenting
 an audio message thereto. The central location typically will disconnect from the
 calling station after completion of an audio message.

26 '027 patent, col. 4, ll. 35-41. "Triggered" therefore merely means "initiated or precipitated."

27 Defendants argue that claim 1 of the '027 patent is invalid because the term "triggered" is
 28 indefinite, not enabled, and no written description in the specification supports claim 1's use of the

1 term. 112 Mot. (dkt. # 675) at 17. The portion of claim 1 with which defendants take issue reads: "a
 2 first outbound circuit from the service center over which the center dials the callback number of the
 3 subscriber when the direct inward dial number is triggered and on which the subscriber enters the
 4 number of the called party." '027 patent, col. 10, ll. 11-15. However, given the constructions of
 5 "triggered" and "DID number," claim 1 is not indefinite and provides that "the center dials the
 6 callback number of the subscriber when the" DID number is initiated, *i.e.*, sent by the terminating
 7 LEC. Defendants' motion for summary judgment that the use of "triggered" renders claim 1 of the
 8 '027 patent invalid under § 112 is denied.

9 **14. "Sensor"**

10 The parties do not seek construction of the term "sensor." However, defendants argue that
 11 no written description supports "sensor" as used in claim 1 of the '027 patent. 112 Mot. (dkt. # 675)
 12 at 17. According to defendants, the phrase "a sensor for receiving the direct inward dial signal sent
 13 by the subscriber to the service center," '027 patent, col. 10, ll 10-11, means that the DID number is
 14 sent by the subscriber, but this is inconsistent with the patentee's definition of DID number, which
 15 requires DID numbers to be passed on by "the terminating LEC," *id.*, col. 6, ll. 13-14. Although not
 16 as carefully drafted as it could have been, since a DID number is the end portion of a phone number
 17 initially dialed by the subscriber, the DID number can properly be said to have been "sent by the
 18 subscriber to the service center" and recognized or sensed. Defendants' motion for summary
 19 judgment that the use of "sensor" renders claim 1 of the '027 patent invalid under § 112 is denied.

20 **15. "Control means"**

21 Claim 1 of the '964 patent includes
 22 control means operable for managing a database of caller information;
 23 . . .

24 the control means further operable for comparing the incoming direct inward dial
 25 telephone number to the preassigned direct inward dial telephone number and, if the
 26 incoming direct inward dial telephone number matches the preassigned direct inward
 27 dial telephone number associated with the subscriber, the control means is further
 28 operable for:

29 calling the subscriber remote telephone number through the first telephone
 30 connection means after the subscriber terminates the incoming call attempt and
 31 connecting to the subscriber telephone station;

1 receiving from the subscriber a calling telephone number for the destination
 2 station;

3 calling the calling telephone number through the second telephone connection
 4 means; and for

5 bridging the first telephone connection means to the second telephone connection
 6 means so that the subscriber is connected to the destination.

7 '964 patent, col. 10, ll. 6-7, 25-42. The parties agree that the interpretation of "control means" is a
 8 means-plus-function limitation governed by 35 U.S.C. § 112 ¶ 6. The parties also agree that the
 9 "control means" has eight functions (managing a data base, comparing, calling the subscriber,
 10 connecting to the subscriber station, receiving, calling the destination, connecting to the destination,
 11 and bridging). However, defendants contend that nothing links the "control means" to any structure
 12 in the specification of the patent. Cygnus responds that defendants'

13 argument is nonsense, since the whole purpose of §112 ¶ 6 claim language is that the
 14 functions need *not* be linked to 'specific structures.' Any structure that is equivalent
 15 to the structure described in the specification may be used, so long as the specified
 16 function is performed. Defendants are simply wrong as a matter of law.

17 Pl.'s Claim Constr. Br. (dkt. # 684) at 6.⁸ However, as the Federal Circuit has stated, "[a] structure
 18 disclosed in the specification qualifies as corresponding structure only if the specification or
 19 prosecution history clearly links or associates that structure to the function recited in the claim."
 20 *Default Proof Credit Card Sys. v. Home Depot U.S.A.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005)
 21 (quotation marks omitted). Despite its apparent mistaken belief that it does not need to link the
 22 "control means" to any structure in the specification, Cygnus offers a portion of the first sentence of
 23 the summary of the invention as the structure corresponding to the "control means": "an automated
 24 call processing system that incorporates an audio response unit and computer." '964 patent, col. 2,
 25 ll. 50-51. The full sentence this phrase is taken from states "[t]his invention, in cooperation with a
 26 public telephone network, provides an automated call processing system that incorporates an audio
 27 response unit and computer in a system arrangement for enabling a subscriber to initiate telephone
 28 calls whose network identified point-of-origin is a physical site other than the physical location of
 the subscriber." *Id.*, ll. 49-55.

⁸ Cygnus also argued that "[c]ontrol means' is a means for controlling, and need not be construed."
 28 Claim Constr. Reply Br. (dkt. # 721) at 13.

1 Cygnus's expert opines that

2 The '964 patent at **3:3-6** shows that a personal computer with a switch software
 3 program may be used to identify the subscriber, look up the call-back number, call
 4 the subscriber and destination and bridge the two calls. Control means should be
 construed to mean a computer and storage device with appropriate software to
 perform the eight functions specified in the claim.

5 Am. Forys Expert Report Claims Constr. (dkt. # 643) at 13. The cited section of the specification
 6 provides "[w]hen a subscriber uses an assigned telephone number to establish a call to this service,
 7 the system will identify the subscriber by using a personal computer or switch software program."
 8 This sentence links the "comparing" function to the structure of "a personal computer or switch
 9 software program." The specification in the section entitled "Detailed Description of the Preferred
 10 Embodiment" identifies the call response unit ("CRU") which is item 20 in figure 2 as including a
 11 computer or switch and consisting of integrated components that permit the system to perform a
 12 number of functions integral to the invention. '964 patent, col. 6, ll. 46-66. Figure 2 and additional
 13 discussion of the preferred embodiment in the specification show that the computer in the CRU
 14 performs the functions of the "control means." The purported inventive aspect of the '964 patent is
 15 the combination of functions that result in a telephone switching system that saves telephone tariffs,
 16 not the programs that allow the computer to perform the functions. One ordinarily skilled in the art
 17 could perform the individual functions with existing technology. The linkage of the functions of the
 18 "control means" to a computer or its equivalent adequately meets the requirements of § 112 ¶ 6.

19 **16. "Automatic bridging device"**

20 Defendants argue that the term "automatic bridging device" as used in claim 1 of the '027
 21 patent is a means-plus-function limitation and that the specification fails to recite sufficient structure
 22 to perform the automatic bridging function. According to claim 1, the function of the "automatic
 23 bridging device" is to "bridg[e] the subscriber on the first circuit to the called party on the second
 24 circuit, whereby the subscriber is telephonically linked to the called party without human
 25 intervention at the service center." '027 patent, col. 10, ll. 40-42. Cygnus claims that "automatic
 26 bridging device" needs no construction and offers expert opinion in support of its position:

27 The Defendants claims [sic] that this term is a means plus function limitation. It
 28 appears to me that the claim describes a component in a system. It describes a
 structure. One of ordinary skill in the art would understand what an automatic

1 bridging device is. There are several examples of such structures in the industry e.g.
 2 a dial in bridge service offered by organizations such as AT&T. The mere act of
 3 dialing in causes bridging.

4 Am. Forys Expert Report Claims Constr. (dkt. # 643) at 26.⁹ In addition, Cygnus claims that two of
 5 its witnesses gave examples of automatic bridging devices. Thomas Thompson testified that Call
 6 Interactive used a "telecommunications switch" called the "AT&T Dimension," although he did not
 7 specifically state whether "AT&T Dimension" corresponded to the "automatic bridging device" of
 8 the '027 patent. *See* Thompson Decl. at 108-09.¹⁰ James Alleman, the named inventor, explained:

9 [Q.] Was the 386 system capable of doing that bridging after the person that was
 10 being called picked up on the line?

11 A. I don't believe—I don't know. I don't know that we've—I believe that the
 12 bridge prior to, it could have, but we certainly didn't attempt to experiment
 13 with that, to the best of my recollection.

14 Q. Did you have any specific hardware that accomplished the bridging function
 15 in the 386 system?

16 A. Yes. It was from Dialogic, as I had mentioned earlier.

17 Q. It was one of the Dialogic boards?

18 A. I believe it truly bridged the two. They were called DX 4 Dialogic boards,
 19 and it really, if you think about a computer system, where there's empty slots,
 20 the DX 4 board would fit in one slot, and another DX 4 would fit in another
 21 slot, just as a second hard drive or serial port would fit in.
 22 And to the best of my recollection, the bridge actually fitted on top of those
 23 two DX 4 boards. So it didn't have a separate slot of its own in the computer,
 24 but it fit on top.

25 Q. Okay.

26 Alleman Depo. at 121.¹¹

27 Defendants argue "automatic bridging device" is a means-plus-function limitation and that it
 28 is fatally indefinite. Defendants point to two portions of the description of the preferred
 29 embodiment which they claim are inconsistent. First, "DTMF Generator **26** recognizes the called

25 ⁹ The court strikes Forys's opinion on whether "automatic bridging device" is a means-plus-function
 26 limitation as without foundation and invading the province of the court.

27 ¹⁰ Excerpts of the September 20, 2006 deposition of Thomas Thompson, including pages 108 and
 28 109, are attached as Exhibit 297 to the declaration John Sutton (dkt. # 685).

29 ¹¹ Excerpts of the September 20, 2006 deposition of James Alleman, including page 121, are
 30 attached as Exhibit 298 to the declaration John Sutton (dkt. # 685).

1 party number DTMF digits entered by the subscriber and outpulses those digits over the second
 2 seized circuit. DTMF generator **26** activates bridging function **29** to bridge the subscriber onto the
 3 second outbound circuit." '027 patent, col. 7, ll. 54-57. Second, "When a second outbound circuit is
 4 seized, as described at **62** in FIG. 4, CRU **20** outpulses the called party number at **70**, and bridges the
 5 subscriber onto the second outbound circuit to monitor call progress tones at **71." Id.**, col. 9, ll.
 6 28-31. The patent appears to recite in different places that bridging is performed by different
 7 components, either the "DTMF generator **26** activat[ing] bridging function **29**" or the "CRU **20**."
 8 However, it is not clear from the '027 patent whether the components along the right edge of
 9 Figure 1 are intended to be subparts of the "CRU **20**" or whether they are distinct from it. In places,
 10 the specification treats them as distinct. *See, e.g.*, '027 patent, col. 7, ll. 25-28 ("At the same time the
 11 CRU **20** delivers the DID digits to the subscriber table server **21**, it also delivers call detail
 12 information to the system message detail recording database (SMDR) **24**."). In another portion,
 13 however, it would appear that at least some of these right-side components are subparts of "CRU
 14 **20**":

15 CRU **20** is a computer, or switch, that is connected to the LEC **15** central office and
 16 consisting of integrated components that permit the system to perform a number of
 17 functions integral to this invention. This includes switching functions to handle line
 18 (circuit) connections; interactive voice response operations; database controller for
 19 subscriber identification; and a system message detail recording (SMDR) unit **24** to
 20 provide information necessary to create call records.
 21 '027 patent, col. 6, ll. 59-67.

22 When a claim limitation does not contain the word "means," the limitation is "presumptively
 23 not a means-plus-function limitation." *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1355
 24 (Fed. Cir. 2006). "However, a limitation lacking the term 'means' may overcome the presumption
 25 against means-plus-function treatment if it is shown that the claim term fails to recite sufficiently
 26 definite structure or else recites function without reciting sufficient structure for performing that
 27 function." *Id.* at 1353 (some quotation marks omitted). "The generic term[] 'device[]' typically
 28 do[es] not connote sufficiently definite structure" to avoid treatment as a means-plus-function
 limitation. *Id.* at 1354. The Federal Circuit has contrasted a pair of examples:

29 Claim language that further defines a generic term like "mechanism" can
 30 sometimes add sufficient structure to avoid 112 ¶ 6. For example, in *Greenberg v.*

1 *Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580 (Fed. Cir. 1996), which involved a
 2 mechanical device, we held that 112 ¶ 6 did not apply to the term "detent
 3 mechanism," because "the noun 'detent' denotes a type of device with a generally
 4 understood meaning in the mechanical arts, even though the definitions are expressed
 5 in functional terms." *Id.* at 1583. The court recited several dictionary definitions for
 6 "detent," including "a mechanism that temporarily keeps one part in a certain position
 7 relative to that of another, and can be released by applying force to one of the parts." *Id.* (internal quotation marks and citations omitted). These definitions connote
 sufficient structure to avoid 112 ¶ 6. We also concluded that "the fact that a
 particular mechanism—here 'detent mechanism'—is defined in functional terms is not
 sufficient to convert a claim element containing that term into a 'means for
 performing a specified function' within the meaning of 112 ¶ 6" because "many
 devices take their names from the functions they perform. *Id.*¹²

8 In contrast, the term "colorant selection," which modifies "mechanism" here, is
 9 not defined in the specification and has no dictionary definition, and there is no
 10 suggestion that it has a generally understood meaning in the art. We therefore agree
 with the district court that "colorant selection mechanism" does not connote sufficient
 structure to a person of ordinary skill in the art to avoid 112 ¶ 6 treatment.¹³

11 *Mass. Inst. of Tech.*, 462 F.3d at 1354 (original bracket removed; footnotes renumbered).

12 Here, "automatic bridging device" is defined in the claim by function as was "detent
 13 mechanism" in *Greenberg*. In addition, Cygnus's expert Forys declared that one skilled in the art
 14 would know what an "automatic bridging device" is and indicated that AT&T offered one. Finally,
 15 the testimony of Alleman and Thompson offers some support to Forys' opinion that one skilled in
 16 the art would know what an "automatic bridging device" was. Therefore, the court concludes that
 17 "automatic bridging device" is not a means-plus-function limitation but rather a limitation that
 18 suggests sufficient structure to one ordinarily skilled in the art to avoid the application of 112 ¶ 6.

19
 20
 21
 22
 23
 24 ¹² Of course, a claim term defined solely in functional terms, without more, would fall within
 25 Section 112(6). *See Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1318 (Fed. Cir. 1999); *see also*
 26 *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

27 ¹³ In *Lighting World[Inc. v. Birchwood Lighting, Inc.]*, we held that it was appropriate to look to
 28 dictionaries "to determine if a disputed term has achieved recognition as a noun denoting structure,"
 and determined that "connector" had a reasonably well-understood meaning as a name for a
 structure. 382 F.3d [1354,]1360-61[(Fed. Cir. 2004)]. That structure was defined in terms of the
 function it performed, "connecting." *Id.* Here, the term "mechanism" is not defined by a function
 that particularizes its structure.

II. BEST MODE

2 Defendants set forth the general standard of the best mode requirement, *see* 112 Mot. (dkt. #
3 675) at 4-5, but do not thereafter present any specific argument that the '964 and '027 patents fail to
4 satisfy the best mode requirement. Defendants' motion, such as it is, that the patents-in-suit are
5 invalid for failure to disclose the best mode is denied.

III. ON-SALE BAR

7 || A. Statutory On-Sale Bar

8 By statute, "[a] person shall be entitled to a patent unless . . . the invention was patented or
9 described in a printed publication in this or a foreign country or in public use or on sale in this
10 country, more than one year prior to the date of the application for patent in the United States." 35
11 U.S.C. § 102(b). The Federal Circuit has explained the on-sale bar:

12 In *Pfaff v. Wells Electronics, Inc.*, the Supreme Court held that a patent claim is
13 invalid under the on-sale bar if two conditions are met: first, the invention must have
14 been the subject of a commercial offer for sale more than one year before the patent
application was filed; second, the invention must have been ready for patenting more
than one year before the filing of the application. Reduction of the invention to
practice is sufficient to satisfy the second condition.

15 *Zacharin v. United States*, 213 F.3d 1366, 1369 (Fed. Cir. 2000) (citation omitted). On April 24,
16 1992, Alleman filed the parent of the applications that eventually gave rise to the two patents-in-suit.
17 '964 patent, ¶ [63]; '027 patent, ¶ [63]. Sale of, or offers to sell, the invention of the patents-in-suit
18 before April 24, 1991 (the so-called "critical date") invalidate them.

B. Ready for Patenting

In 1988, James Alleman founded Paragon Services International, Inc. By 1990, Paragon was providing long-distance phone service using what the parties refer to as the "black box system." This system required two phone lines for each user, as well as the "black box," which would receive a user's phone call on one line, place an outgoing call on the other, and bridge the two calls. The need for two lines and a black box per user made the black box system somewhat expensive. In 1990, Alleman developed what the parties refer to as the "386 system" and transferred Paragon's existing users over to it from the black box system.

1 During prosecution of the '027 patent, Alleman stated to the PTO: "I reduced to practice the
 2 invention of the claims before June 27, 1990" as part of an attempt to swear behind prior art cited by
 3 the examiner. Wood Decl. (dkt. # 681), Ex. 7 (Feb. 11, 1997 Alleman Decl.) ¶¶ 3, 6. Alleman now
 4 seeks to distance himself from his 1997 declaration. In a November 2, 2006 declaration, Alleman
 5 states:

6 I did not know what the legal term "reduced to practice" meant on March 11, 1997.
 7 The term was drafted by counsel for Cygnus who was not familiar with the
 8 prosecution of the earlier patent applications It made no difference, as it turned
 9 out, because the references relied upon by the examiner in the parent case were all
 10 overcome in the Board of Appeals decision in 1998, which had nothing to do with the
 11 difference between June 1990 and April 1991. It was harmless error.

12 Alleman Decl. (dkt. # 700) ¶ 18.

13 "A party cannot create an issue of fact by supplying an affidavit contradicting his prior
 14 deposition testimony, without explaining the contradiction or attempting to resolve the disparity."
 15 *Sinskey v. Pharmacia Ophthalmics*, 982 F.2d 494, 498 (Fed. Cir. 1992), *abrogated in part on other*
 16 *grounds, Pfaff v. Wells Elecs.*, 525 U.S. 55, 67-68 (1998); *see also Kennedy v. Allied Mut. Ins. Co.*,
 17 952 F.2d 262, 266-67 (9th Cir. 1991). A court should consider an explanation by the declarant as to
 18 why he later seeks to change his earlier sworn testimony. *Cleveland v. Policy Mgmt. Sys. Corp.*, 526
 19 U.S. 795, 807 (1999). Here, there is no satisfactory explanation.

20 Alleman cannot blame the attorney who drafted the declaration for the mistake. A party is
 21 "bound by the actions of its attorney." *Navajo Tribe of Indians v. United States*, 601 F.2d 536, 539
 22 (Ct. Cl. 1979). Patent applications are *ex parte* proceedings which have substantial effect upon the
 23 rights of the public, and as such, Alleman and "counsel for Cygnus" had a duty to ensure filings
 24 were accurate.

25 A patent by its very nature is affected with a public interest. The public interest is
 26 best served, and the most effective patent examination occurs when, at the time an
 27 application is being examined, the Office is aware of and evaluates the teachings of
 28 all information material to patentability. Each individual associated with the filing
 and prosecution of a patent application has a duty of candor and good faith in dealing
 with the Office, which includes a duty to disclose to the Office all information known
 to that individual to be material to patentability as defined in this section.

29 37 C.F.R. § 1.56(a). Alleman's 1997 declaration was made at the time for reasons substantially
 30 affecting patentability and under penalty of perjury. It cannot now be disavowed because Alleman
 31

1 allegedly did not know in 1997 what the legal term "reduction to practice" meant and because it
 2 turned out to be "harmless error." Alleman's subsequent explanation is, in these circumstances,
 3 insufficient to justify ignoring the 1997 declaration and considering his contrary 2006 declaration.
 4 Further, and perhaps more importantly, the evidence suggests that Alleman's 1997 declaration is
 5 accurate. The 386 system embodied the invention of the patents-in-suit. Alleman explained how the
 6 invention worked and how it satisfied the claim limitations of the application that became the '027
 7 patent. Wood Decl., Ex. 7 (Feb. 11, 1997 Alleman Decl.) (dkt. # 683) ¶¶ 8-26. The invention was
 8 reduced to practice "before June 27, 1990" and thus ready for patenting before the critical date of
 9 April 24, 1991.

10 Cygnus, however, currently argues that the 386 System was experimental because (1)
 11 Alleman says it was experimental, and (2) each user only had to pay for whatever telephone charges
 12 his use of the system generated. Alleman's opinion that the 386 System was experimental before the
 13 critical date is contrary to the rule that reduction to practice cuts off access to the experimental use
 14 exception.¹⁴ "[O]nce an invention has been reduced to practice, it can no longer meet the
 15 experimental use exception." *Zacharin v. United States*, 213 F.3d 1366, 1369 (Fed. Cir. 2000).
 16 Nevertheless, Cygnus argues at great length that the fact that the invention was not "commercially
 17 scalable" until April 25, 1991 indicates that all activity prior to that date was experimental. As
 18 commercial scalability is not a limitation of any claim, its absence is not relevant to the § 102(b)
 19 analysis. *See STX, LLC v. Brine, Inc.*, 211 F.3d 588, 590-91 (Fed. Cir. 2000). In fact, the claims at
 20 issue all refer to "the subscriber" and "a subscriber."

21 As the invention of the '027 patent was reduced to practice many months before the critical
 22 date, the second prong of *Pfaff* is met here.

23

24

25 ¹⁴ Defendants' motion to strike portions of Alleman's November 2, 2006 declaration under Fed. R.
 26 Evid. 701 as inadmissible legal opinions is granted. Similarly, defendants' motions to strike portions
 27 of Alleman's November 2, 2006 declaration under Fed. R. Evid. 602, 704, 802 are granted.
 28 Defendants' motion to strike under Fed. R. Evid. 402 is largely premised on the assumption that only
 the 386 System is relevant to the issues at hand. As it is not clear that the other matters about which
 Alleman testifies are irrelevant to the issues at hand, defendants' motion to strike under Fed. R.
 Evid. 402 is denied.

1 **C. Offer for Sale**

2 Alleman admits that while his 386 System was running in 1990, he charged users of the
 3 system for the costs of the calls that they made. Wood Decl. (dkt. # 681), Ex. 2 at 8-15 (Mar. 8,
 4 2001 Alleman Depo. at 48, 64, 137-39). Cygnus argues that because Alleman made no profit from
 5 these transactions, they do not constitute a "sale" for purposes of § 102(b).

6 Whether a transaction generates a profit is not determinative of whether it constitutes a sale
 7 under § 102(b). *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1381 (Fed. Cir. 1998). In *Zacharin*
 8 *v. United States*, the Federal Circuit stated that "[a] contract to supply goods is a sales contract,
 9 regardless of the means used to calculate payment and regardless of whether the goods are to be
 10 used for testing in a laboratory or for deployment in the field." 213 F.3d at 1370. While Alleman
 11 provided services rather than goods, that is not a sound basis to distinguish *Zacharin*. Under the
 12 logic of *Zacharin*, payment constitutes a sale "regardless of the means used to calculate payment,"
 13 and although Alleman may have only been charging his costs to the users, providing services in
 14 exchange for payment constitutes a sale. "A patent owner may have created an on-sale bar despite
 15 *losing* money on a sale." *U.S. Environmental Products Inc. V. Westall*, 911 F.2d 713, 717 (Fed. Cir.
 16 1990).

17 Cygnus argues that the individuals who used his system prior to the critical date and paid his
 18 telephone charges were doing so for experimental purposes. However, Alleman's reduction to
 19 practice before June 27, 1990 cut off the ability to claim any experimental use. *See Zacharin*, 213
 20 F.3d at 1369. However, even if Alleman's admission of reduction to practice before June 27, 1990,
 21 is ignored, Alleman further declared:

22 Before June 27, 1990, I had built a system that confirmed that my ideas would work.
 23 . . . However in order to make the invention compatible with telephone equipment, I
 24 needed software to implement the steps and system of my invention.

25 * * *

26 23. The software I asked Mr. Gunther to prepare for me was completed by
 27 September, 1990. I was then in position to find a vendor for preparing a complete
 28 system for my invention, and marketing the invention to the public. To that end, I
 contacted a joint venture called "Call Interactive." The joint venturers were AT&T,
 long known for expertise in making telephone service and hardware, and American
 Express, long known for its marketing expertise. On October 15, 1990, I entered into
 a confidential disclosure agreement with Call Interactive regarding implementing and
 marketing my invention

1 24. After receiving the disclosure in confidence of my invention, Call
 2 Interactive successfully completed the installation and development plans for
 3 introducing the invention, and set the date of April 25, 1991, as the date of product
 4 introduction.

5 Wood Decl. (dkt. # 681), Ex. 7 at ¶¶ 6, 23-25. Alleman, therefore, had clearly entered into a
 6 contract for the marketing and sale of the alleged invention prior to the critical date. A "sale" occurs
 7 when the parties offer or agree to reach a contract to give and pass rights of property for
 8 consideration. *See Special Devices, Inc. v. OEA, Inc.*, 270 F.3d 1353, 1355-57 (Fed. Cir. 2001).
 9 The fact that Call Interactive's commercial use was kept secret until such time as marketing to the
 10 public was announced is irrelevant because either public use¹⁵ or a sale prior to the critical date
 11 precludes the ability to patent an invention. *See Woodland Trust v. Flowertree Nursery, Inc.* 148 F.
 12 3d 1368, 1370-71 (Fed. Cir. 1998). Similarly, the fact that Call Interactive did not intend to begin
 13 public marketing until one day after the critical date does not preclude the statutory bar. *See Pfaff*,
 14 525 U.S. at 67; *STX, LLC v. Brine*, 211 F.3d 588, 590 (Fed. Cir. 2000) ("The fact that delivery was
 15 set for dates after the critical date is irrelevant to the finding of a commercial offer to sell.").

16 The invention of the patents-in-suit was offered for sale more than a year before the initial
 17 patent application was filed. Defendants' motion for summary judgment that the patents-in-suit are
 18 invalid under § 102(b) is therefore granted.

19 IV. OBVIOUSNESS

20 Defendant United World Telecom, on behalf of all defendants, moves to have both patents-
 21 in-suit declared invalid as obvious under 35 U.S.C. § 103(a). The Supreme Court has explained that
 22 "[w]hile the ultimate question of patent validity is one of law," several "factual inquires" are relevant
 23 to the determination: "the scope and content of the prior art are to be determined; differences
 24 between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in
 25 the pertinent art resolved." *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Furthermore,
 26 "secondary considerations" such as "commercial success, long felt but unsolved needs, failure of
 27 others, etc." may also come into play. *Id.* at 17-18. As the Federal Circuit has explained, all this is a

28 ¹⁵ The court does not reach defendants' argument that Alleman's activity in providing services to
 29 individuals according to the method and system claimed in the patents-in-suit using his 386 system
 30 was a public use of the claimed invention.

1 framework for determining "whether a person of ordinary skill in the art would have been motivated
 2 to combine the prior art to achieve the claimed invention and whether there would have been a
 3 reasonable expectation of success in doing so." *DyStar Textilfarben GmbH & Co. Deutschland KG*
 4 v. *C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006). However, the question of what is the
 5 appropriate test for judging obviousness is pending before the Supreme Court in *KSR Intern. Co. v.*
 6 *Teleflex, Inc.*, 126 S.Ct. 2965 (Mem.) (2006), and the outcome of that case could impact the
 7 obviousness analysis in this case.

8 Defendant United World Telecom's argument for the obviousness of all asserted claims
 9 begins with claim 11 of the '027 patent (which now stands finally rejected by the PTO), which reads:

10 In a method for economically using differences in tariff rates for international calls by
 11 originating calls from a location having relatively lower tariff rates to a location
 12 having relatively higher rates, in which a subscriber calls a service located in a
 13 jurisdiction having relatively low cost outbound calls, the service calls the subscriber
 14 back on an outbound circuit, the subscriber enters the telephone number of the called
 15 party in the called party's jurisdiction, the service calls the called party on a second
 16 outbound circuit, and the service bridges the two circuits to telephonically connect
 17 the subscriber and the called party, the improvement comprising

18 using direct inward dialing for the initial call from the subscriber to the service,
 19 and

20 the subscriber hangs up before there is a charge for the call from the subscriber to
 21 the service.

22 '027 patent, col. 10, line 63-col.12, line 4 (formatting altered). Defendant's argument for invalidity,
 23 as the court understands it, is based upon the following logic: (1) because claim 11 is in Jepson
 24 format, the preamble is admitted to be prior art; (2) Cygnus argued and the PTO stated during
 25 prosecution that the point of novelty of the invention was using a DID number to identify the
 26 subscriber; (3) it would have been obvious to one of ordinary skill in the art to combine DID
 27 identification with the admitted prior art of the preamble of claim 11 of the '027 patent; and (4)
 28 because the preamble of claim 11 of the '027 patent is admitted as prior art, there is no need to
 analyze the obviousness of the claims-at-issue limitation by limitation; rather, all that is required to
 prove obviousness is a showing that it would have been obvious to one of ordinary skill in the art to

1 combine the preamble of claim 11 of the '027 patent with the use of DID numbers to identify
 2 subscribers.¹⁶ *See* 103 Mot. (dkt. # 674) at 9-16.

3 Cygnus's opposition, as far as the court can make it out, is that defendants have not shown
 4 that all limitations of each claim at issue are present in the prior art and that it would have been
 5 obvious to one of ordinary skill in the art to combine them. Defendant United World Telecom does
 6 present references which it represents are prior art disclosures of the limitations of claims 1 and 6 of
 7 both patents-in-suit. *See* Weisberg Decl. (dkt. # 677), Ex. 21. Defendant does not, however, show
 8 that the combination of all the limitations of these claims are found in the prior art except to the
 9 extent purportedly admitted by Cygnus, nor does defendant show that one of ordinary skill in the art
 10 would be motivated to combine the limitations of any claim at issue. "Although a preamble is
 11 impliedly admitted to be prior art when a Jepson claim is used unless the preamble is the inventor's
 12 own work, the claimed invention consists of the preamble in combination with the improvement."
 13 *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 315 (Fed. Cir. 1985) (citations omitted).
 14 Defendant has in essence handed the court the pieces of a jigsaw puzzle and asked the court to
 15 assemble it. Defendant has not shown "whether a person of ordinary skill in the art would have been
 16 motivated to combine the prior art to achieve the claimed invention and whether there would have
 17 been a reasonable expectation of success in doing so." *Dystar*, 464 F.3d at 1360. Defendant United
 18 World Telecom's motion for summary judgment on behalf of all defendants that the patents-in-suit
 19 are invalid as obvious is therefore denied.

20

21

22 ¹⁶ The parties' briefing on this issue contains scant citation to case law. The court's own research
 23 did not uncover a case in which the Federal Circuit directly addressed the issue of whether the
 24 admission of prior art for one Jepson claim should be construed as an admission only as to that
 25 Jepson claim or all claims in the same patent or, in addition, to claims in related patents. *See Rowe*
v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997) (all claims considered together because patent applicant
 26 had not addressed claims separately below); *Sjolund v. Musland*, 847 F.2d 1573 (Fed. Cir. 1988) (all
 27 claims at issue in Jepson format); *Pentec, Inc. v. Graphic Controls Corp.* 776 F.2d 309, 312 (Fed.
 28 Cir. 1985) (all claims at issue in Jepson format); *In re Fout*, 675 F.2d 297, 298 (C.C.P.A. 1982)
 (unclear whether any claims were not in Jepson format); *see also Catalina Mktg. Int'l v.*
Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) ("Whether to treat a preamble as a
 limitation is a determination resolved only on review of the entire patent to gain an understanding of
 what the inventors actually invented and intended to encompass by the claim.") (quotation marks,
 brackets, and ellipses omitted).

VI. INFRINGEMENT

A. Infringement Judged on Court's Claim Construction

Plaintiff Cygnus and several defendants have made motions for summary judgment of infringement or non-infringement of the patents-in-suit which must necessarily be determined using the court's claim construction. "An infringement analysis involves two steps. First, the court determines the scope and meaning of the patent claims asserted, and then the properly construed claims are compared to the allegedly infringing device." *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1992) (internal citations omitted).

Cygnus describes the patents-in-suit as covering "the uncompleted call signaling configuration of international call-back." This description is far too broad in light of the court's claim construction. However, the court did not adopt all of defendants' claim construction positions, either. The parties' arguments for summary judgment are addressed based upon the court's construction of the patent claims at issue.¹⁷

B. Individual Summary Judgment Motions on Infringement

1. United World Telecom

In case no. C-03-03596, Cygnus and defendant United World Telecom ("UWT") have made cross-motions for summary judgment regarding whether UWT infringes the patents-in-suit.¹⁸

¹⁷ Several defendants claim that under the Federal Circuit's decision in *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282 (2005), they cannot be liable for infringing the asserted method claims because certain steps, such as "the subscriber terminates the incoming call attempt," are for international call-back not performed in the United States. The Federal Circuit did hold that the performance outside of the United States of any step of a method claim precluded a finding of patent infringement. *Id.* at 1318. However, the Federal Circuit stated that it did "not hold that method claims may not be infringed under the 'sells' and 'offers to sell' prongs of section 271(a)." *Id.* at 1320-21. All defendants who make arguments are located in the United States, so at the very least, disputed issues of material fact remain as to whether *NTP* prevents them from being liable for infringing the asserted method claims.

¹⁸ At the hearing on these motions, UWT moved to strike reference to Cygnus's exhibits 299 and 400 through 404 because those exhibits were not served with Cygnus's motion for summary judgment against UWT. The court granted the motion. *See Fed. R. Civ. P. 56(e)* (supporting evidence shall be served with motion). Cygnus later argued that it had indeed served these six exhibits upon UWT. Revised MSJ - UWT (dkt. # 751) at 2. Examination of clerk's file reveals that the Sutton declaration served with Cygnus's original motion for summary judgment against UWT neither referred to exhibits 299 or 400 through 404 nor had any of them attached. *See Sutton Decl.* (dkt. # 689). However, because Cygnus's arguments based upon these exhibits are not persuasive,

1 Some form of direct inward dialing appears in all of the asserted claims.¹⁹ Cygnus argues
 2 that exhibits 400, 401, and 404 show that UWT refers to the telephone numbers that UWT's
 3 subscribers dial to trigger call-back as "DID." What UWT calls these numbers is irrelevant to
 4 infringement analysis; if Cygnus could prove infringement by showing that UWT merely used
 5 Cygnus's terminology, claim construction would be unnecessary. Cygnus has presented no evidence
 6 that the "DID" referred to by UWT is "the last four or five numbers dialed by a subscriber which are
 7 passed to the system over a trunk line capable of carrying a direct inward dial number."

8 Cygnus also argues that exhibits 401, 402, and 403 are evidence that UWT allows customers
 9 to "trigger," *i.e.*, initiate or precipitate, call-back.²⁰ However, showing that UWT allows "triggering"
 10 of calls only goes part of the way towards proving UWT infringes claim 1 of the '027 patent, the
 11 only asserted claim in which "triggering" appears. Even if the court did not consider the evidence
 12 presented by UWT, Cygnus has fallen far short of showing that any method or device used by UWT
 13 meets each limitation of any one of the asserted claims, requiring the court to deny Cygnus's motion
 14 for summary judgment against UWT.²¹

15 In connection with its cross-motion for summary judgment, UWT offers the declaration of
 16 Thierry Genoyer as evidence regarding its call-back operations. However, this declaration was

17 for the sake of argument, the court will assume the exhibits show the facts Cygnus argues that they
 18 show.

19 ¹⁹ The phrase "direct inward dial telephone number" appears in claim 1 of the '964 patent seven
 20 times. '964 patent, col. 10, ll. 10-11, 17, 20, 26-30. It appears in claim 6 of the same patent six
 21 times. *Id.*, col. 10, l. 66, col. 11, ll. 3-4, 7-11. The phrase "direct inward dial number" appears
 twice in claim 1 of the '027 patent.

22 ²⁰ Cygnus also argues that evidence of how defendants presently provide call-back services is
 23 relevant to claim construction. It is not. "[C]laims may not be construed by reference to the accused
 24 device." *NeoMagic Corp. v. Trident Microsystems, Inc.*, 287 F.3d 1062, 1074 (Fed. Cir. 2002).

25 ²¹ The hearing on these motions was held on November 21, 2006. On December 2, 2006, Cygnus
 26 filed a "revised" motion for summary judgment against UWT. Revised MSJ - UWT (dkt. # 751).
 27 Cygnus's justification for doing so was that the court had excluded Cygnus's exhibits 299 and 400
 28 through 404, which Cygnus mistakenly asserted had been filed with its original motion. As
 Cygnus's premise for filing its revised motion is incorrect, the court denies Cygnus leave to file the
 motion. *See Civil L.R. 7-3(d)* ("[O]nce a reply is filed, no additional memoranda, papers or letters
 may be filed without prior Court approval."). As the court will not consider the revised motion
 against UWT, AT&T's motion to strike Cygnus's revised motion as an improper attempt for Cygnus
 to reargue aspects of claim construction relevant to defendants other than UWT (*see* Mot. Strike,
 dkt. # 755) is moot.

1 submitted marked "under seal" purportedly "pursuant to the Court's Protective Order," but UWT did
 2 not make a motion to seal as required by Civil L.R. 79-5 or submit a proposed order. *See* Notice
 3 (dkt. # 120 in case no. C-03-03596). At the request of Cygnus, the magistrate judge assigned to this
 4 case extended a protective order that initially covered case no. C-02-00145 to all to all consolidated
 5 proceedings (*see* Protective Order, dkt. # 641). The magistrate judge altered the stipulated
 6 protective order in case no. C-02-00145 to specifically require the parties to comply with Civil L.R.
 7 79-5. Protective Order (dkt. # 19 in case no. C-02-00145) ¶ 3. Under Civil L.R. 79-5(a), "[a]
 8 stipulation, or a blanket protective order that allows a party to designate documents as sealable, will
 9 not suffice to allow the filing of documents under seal." Cygnus objects that there is no court order
 10 allowing the Genoyer declaration to be filed under seal. As Cygnus is correct, the court will not
 11 consider the Genoyer declaration lodged on November 6, 2006, and clerk shall return it to UWT as
 12 required by Civil L.R. 79-5(e).

13 Although UWT lacks any competent evidence that it does not infringe, as the defendant,
 14 UWT may still be entitled to summary judgment by pointing out that Cygnus lacks evidence of a
 15 necessary element of a claim. *See Nissan Fire & Marine Ins. Co. v. Fritz Cos.*, 210 F.3d 1099, 1102
 16 (9th Cir. 2000). As discussed above, Cygnus has not presented evidence that UWT's methods or
 17 devices meet each limitation of the asserted claims. UWT's motion for summary judgment that it
 18 does not infringe the patents-in-suit is therefore granted.

19 **2. Dial-Thru International**

20 Cygnus moves for summary judgment of liability for infringement but not damages against
 21 defendant Dial-Thru International in case no. C-02-00142. The evidence that Cygnus presents in
 22 support of its motion is similar to that it seeks to present in connection with its motion for summary
 23 judgment against UWT. Cygnus offers printouts from several websites that show Dial-Thru and
 24 companies Dial-Thru acquired refer to DID numbers. *See* Cygnus Exs. 199 ("Callback works by
 25 assigning you a personal access number (called a 'DID number')."), 412 ("Enter DID"), 413 ("Your
 26 Access Code (DID)'), 414 ("Dial around works by assigning you a personal access number (called a
 27 'DID number')."), 415 ("Enter your 10 digit DID number (the number given to you when you signed
 28

1 up)"). Beyond the fact that certain websites mention a "DID number," Cygnus has no evidence that
 2 Dial-Thru infringes any claims of the patents-in-suit.

3 Cygnus does, however, recite that Dial-Thru's methods and devices contain the limitations of
 4 each of the five asserted claims. *See* MSJ - Dial-Thru (dkt. # 686) at 5-7. This recitation is without
 5 reference to and is completely unsupported by any evidence. In addition, Dial-Thru presents
 6 evidence that its subscribers do not trigger call-back using a DID number. Instead, for some
 7 services, customers dial a telephone number and a device associated with that telephone number
 8 sends an "alphanumeric sequence" of "at least seven characters" over the internet to Dial-Thru's
 9 facilities. Jenkins Decl. (dkt. # 262 in case no. C-02-00142) ¶¶ 6-7, 9-10. In some of these services,
 10 all customers in the same country call the same phone numbers for service. *Id.* ¶ 10. For other Dial-
 11 Thru services, the customer does not dial a telephone number at all, but instead transmits an
 12 "alphanumeric sequence" of "at least seven character[s]" via "e-mail," "SMS message," or "a
 13 webpage" to Dial-Thru. *Id.* ¶ 8. Dial-Thru also explains that it referred to customers' access
 14 numbers as DID numbers to avoid confusing them, even after the method of providing service no
 15 longer used DID technology.²² *Id.* ¶ 12. This evidence shows that these services of Dial-Thru do
 16 not use DID numbers in the sense required by the patents-in-suit because passing "alphanumeric
 17 sequences" over the internet is not passing DID numbers "over a trunk line capable of carrying a
 18 direct inward dial number."

19 Cygnus's motion for summary judgment against Dial-Thru is denied.²³

20 **3. GlobalPhone Corp.**

21 Cygnus moves for summary judgment of infringement but not damages against defendant
 22 GlobalPhone Corp. in case no. C-02-05437. The evidence Cygnus presents in support of its motion
 23 is merely a general description of how GlobalPhone's service works from GlobalPhone's website.

24
 25 ²² "[W]hen a claim term understood to have a narrow meaning when the application is filed later
 26 acquires a broader definition, the literal scope of the term is limited to what it was understood to
 mean at the time of filing." *Kopykake Enters. v. Lucks Co.*, 264 F.3d 1377, 1383 (Fed. Cir. 2001).

27 ²³ Dial-Thru requests that its motion for summary judgment of non-infringement be granted. Opp'n
 28 (dkt. # 242 in case no. C-02-00142) at 12. Dial-Thru has not, however, noticed a motion for
 summary judgment since the court denied its 2003 motion for summary judgment.

1 *See* Cygnus Exs. 417, 418. Cygnus also repeats its erroneous assertion that because GlobalPhone
 2 uses ten-digit access numbers, it necessarily uses DID numbers. Although not required to,
 3 GlobalPhone presents evidence that some of its services do not use DID numbers within the
 4 meaning of the patents-in-suit. *See* McCarthy Decl. (dkt. #) ¶¶ 4-7. Cygnus's motion for summary
 5 judgment against Dial-Thru is denied.²⁴²⁵

6 **4. World-Link, Inc. and Americom, Inc.**

7 In case no. C-03-04003, defendant World-Link, Inc. moves for summary judgment that it
 8 does not infringe the patents-in-suit. World-Link asserts that Cygnus lacks any evidence that World-
 9 Link's methods or devices infringe any one of the asserted claims. In response, Cygnus presents
 10 pages from World-Link's website explaining how World-Link's service works. Cygnus Ex. 425.
 11 This website indicates that each World-Link customer has an unique phone number he or she dials
 12 to access World-Link's service. *Id.* Beyond this, Cygnus has no evidence of how World-Link's
 13 services operate. On the other hand, World-Link presents a declaration, which although somewhat
 14 conclusory, states that "[n]one of the technologies used by World-Link for international callback
 15 services, whether sold to end-users or to carrier customers, used or included DID numbers" and that
 16 "[a]ll technologies used by World-Link for international callback send at least ten digits of the
 17 telephone number dialed by the customer over a digital signaling facility." Stamoulis Decl. (dkt. #
 18 102-3 in C-03-04003 ¶¶ 8, 11).

19 Cygnus lacks evidence that any method or device used by World-Link meets all the
 20 limitations of any asserted claim. World-Link's motion for summary judgment that it does not
 21 infringe either patent-in-suit is therefore granted.

22 Defendant Americom, Inc. joins World-Link's motion. Americom presents evidence that it
 23 only resells the services of World-Link and IDT. Kreutzer Decl. (dkt. # 716) ¶ 3. IDT settled with
 24 Cygnus; the settlement covered IDT services resold by Americom. *Id.* ¶ 4. Cygnus does not contest

25 ²⁴ GlobalPhone also requests that its motion for summary judgment of non-infringement be granted.
 26 Opp'n (dkt. # 186 in case no. C-02-05437) at 10. GlobalPhone has not, however, noticed a motion
 27 for summary judgment since the court denied its earlier motion for summary judgment made in
 2003.

28 ²⁵ Neither side's complaints about the other's conduct in discovery warrants consideration.

1 these facts. *See* Opp'n (dkt. # 729) at 3. As World-Link's motion for summary judgment has been
 2 granted, Americom is likewise entitled to summary judgment that it does not infringe the patents-in-
 3 suit.

4 **5. A.M.S. Voicecom, Inc.**

5 A.M.S. Voicecom, Inc. ("AMS") is also a defendant in case no. C-03-04003. AMS moves
 6 for summary judgment of non-infringement. As support for its motion, AMS presents evidence that
 7 instead of using "DID number" technology to provide call-back services, AMS uses only "Primary
 8 Rate Interface ('PRI') (a type of ISDN)." Guler Decl. (dkt. # 708) ¶¶ 24-25. In opposition, Cygnus
 9 presents an AMS webpage that mentions "Your 7 or 10 Digit DID (Key#) Number." Cygnus Ex.
 10 421. Cygnus argues but presents no evidence that AMS's "PRI/ISDN exchange" is equivalent to the
 11 use of DID numbers. Opp'n (dkt. # 727) at 3. AMS has presented evidence that it does not use DID
 12 numbers within the meaning of the patents-in-suit. Cygnus has no evidence to the contrary and
 13 therefore lacks evidence sufficient to prove that AMS infringes any asserted claim. AMS's motion
 14 for summary judgment is granted.

15 **VII. PROCEDURAL OBJECTIONS**

16 The parties raise several procedural objections. *See, e.g.*, 103 & 112 Opp'n (dkt. # 698) at 1-
 17 3. Any procedural objections not addressed elsewhere are relatively minor and in light of past
 18 history balance out and do not affect significant substantive rights. Given the lengthy nature of these
 19 proceedings, deciding issues on the merits is preferable.

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VIII. ORDER

For the reasons given above, the court:

1. Construes the disputed language of the claims as follows:

Term or phrase	Court's construction
"after the subscriber terminates the incoming call attempt"	no construction necessary
order of steps of claim 6 of '964 patent	Steps [1], [2], and [3] may occur in any order relative to each other, but all must occur before step [4]. After step [4], steps [a][ii], [a][i], [a][iii], [b], [c] and [d] must occur in that sequence.
"direct inward dial telephone number"	the last four or five numbers dialed by a subscriber which are passed to the system over a trunk line capable of carrying a direct inward dial number
"telephone communication link"	no construction necessary
"telephone exchange"	a system of electronic components that connects telephone calls
"telephone connection means"	"means-plus-function" limitation with function of being operable for connecting and receiving with corresponding structure of a telephone line or its equivalent
"telephone exchange connection"	telephone line
"subscriber telephone station"	a device that allows audio communication over a telephone network
"dialing"	no construction necessary
"calling"	no construction necessary
"trunk line"	a phone line specially configured to pass a DID number along with a call
"service center"	the central location at which the system apparatus carries out the process of the invention
"enters"	dials
"triggered"	initiated or precipitated
"control means"	means-plus-function limitation with eight functions (managing a data base, comparing, calling the subscriber, connecting to the subscriber station, receiving, calling the destination, connecting to the destination, and bridging) with corresponding structure of a computer or its equivalent
"automatic bridging device"	no construction necessary

1 2. Denies defendants' motion that the patents-in-suit are invalid because certain limitations
2 are indefinite;

3 3. Denies defendants' motion that the patents-in-suit are invalid for failure to disclose the
4 best mode in violation of 35 U.S.C. § 112 ¶ 1;

5 4. Grants defendants' motion that the patents-in-suit are invalid under the on-sale bar of 35
6 U.S.C. § 102(b);

7 5. Denies defendants' motion that the patents-in-suit are obvious under 35 U.S.C. § 103(a);

8 6. Denies Cygnus's motion for leave to file a revised motion for summary judgment against
9 UWT;

10 7. Denies Cygnus's motions for summary judgment of infringement against UWT, Dial-
11 Thru, and GlobalPhone;

12 8. Grants the motions of UWT, World-Link, Americom, and AMS for summary judgment of
13 non-infringement;

14 9. Overrules all procedural objections not elsewhere addressed; and

15 10. Requests the clerk return the Genoyer declaration lodged on November 6, 2006 to UWT
16 pursuant to Civil L.R. 79-5(e).

17 As this order disposes of all claims in these consolidated proceedings except case
18 no. C-04-04247, judgments will be entered in favor of all defendants in the pending cases except
19 case no. C-04-04247.

20
21 DATED: 3/29/07


RONALD M. WHYTE
United States District Judge

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Counsel is responsible for distributing copies of this order to co-counsel, as necessary.

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